Notebook Series -- Notebooks by Edison
Notebook, N-12-12-04

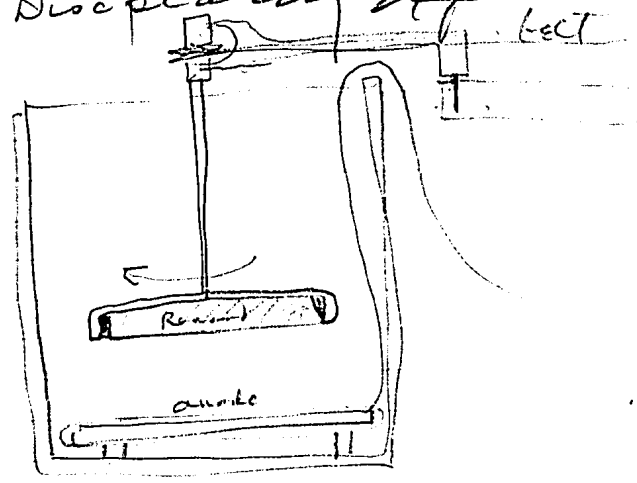
This notebook was used by Edison on December 4, 1912. The entries pertain to the electroplating processes involved in disc record manufacture. Most of the notes relate to problems observed during electrolysis, including dirt and gas bubbles adhering to the plated face of "master" and "submaster" molds. Also included are notes on modifications to the electroplating tank. The pages are unnumbered. Only five pages have been used.

Dec 4 1912

Experiments to get rid of gas bubbles which cling to the disc masters + submasters + also dust which persistently adheres to face of the gold + also the copper resulting in thousands of specs of Extraneous matter which is plated in the Master Copper record + which finally ruins the great pressure + heat of impressing the record in Condensity, producing depressions in the metal most of which cannot be observed by the Microscope but which nevertheless produce crackling sounds in the finished record which is objectionable when very delicate music + fine overtones are to be made audible in the phonograph —

Dec 4 1912

Disc plating Expt



face of record is down & rotated 80 Revs per min —

The anode is covered with a Cotton bag to keep the sludge of impurities from anode being thrown into the solution & sticking to face of record, the rotation not being able to detach it

Dec 4 1912 Contd

I find Cotton fibres come off
easier on face of second
& that linen or bastes on the
fibres do not come off being
of enormous length as compared
to Cotton.
We have Reg. Rulphide Copper
plating solution, rather
acid +

~~We~~ As the cathode of the
record does not have much
velocity the dead Cathode name
therefore gas bubbles adhere

We are using filtered air
passed by a pipe into the
solution to agitate the
sol. to detach these bubbles
which it does but it also
boils so to speak the liquid
& any specs in it are
thrown against the face

Dec 4 1912 Contd —

of the second so the remedy is nearly as bad as the disease

Have tried strings, brushes, the latter scratches the good polishing it is hard to work off strings fall away by gravity

Another bad thing is that the impurities expand by buoyancy float upward

If the second face is so upward then those that had company would float up but those that had not would lay on second,

Another bad thing is that only substances will peacefully get on surface of liquid. Especially from sweat glands of hands & chin Enormously increases

N

the surface